



Rocket Engine Test Firing and Engine Test Facilities NESHAP

Opening Meeting
April 22, 1998

- ◆ Welcome
- ◆ Introductions
- ◆ Disclaimer
- ◆ Format of the meeting

Purpose

- ◆ Clean Air Act Section 112 (Air Toxics) requires National Emission Standards for Hazardous Air Pollutants (NESHAP).
- ◆ EPA has determined that rocket engine test firing and engine test facilities may emit several of the HAPs listed in Section 112(b).
- ◆ EPA is required to promulgate NESHAPs for rocket engine test firing and engine test facilities by November 15, 2000.

Agenda

Rocket Engine Test Firing

8:00 a.m.	Introduction and Purpose of Meeting Overview of Agenda
8:15 a.m.	Overview of NESHAP Process
8:45 a.m.	Discussion 1: Source Category
9:45 a.m.	Break
10:00 a.m.	Discussion 2: Site Visit Selection
10:30 a.m.	Discussion 3: Testing
10:45 a.m.	Discussion 4: Questionnaire Development
11:15 a.m.	Closing
11:30 a.m.	Adjourn

Agenda

Aircraft Engine Test Firing

12:30 p.m.	Introduction and Purpose of Meeting Overview of Agenda
12:45 p.m.	Overview of NESHAP Process
1:15 p.m.	Discussion 1: Source Category
2:15 p.m.	Break
2:30 p.m.	Discussion 2: Site Visit Selection
3:00 p.m.	Discussion 3: Testing
3:30 p.m.	Discussion 4: Questionnaire Development
3:45 p.m.	Closing
4:00 p.m.	Adjourn



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Scope of the Source Category

- ◆ Major Sources
- ◆ Area Sources
- ◆ Co-located Sources

Scope of the Source Category (Cont.)

- ◆ Rocket Engine Test Firing
- ◆ Aircraft Engine Test Firing
- ◆ Non-Aerospace Test Facilities

Scope of the Source Category (Cont.)

- ◆ Rocket Engine Test Firing
 - ▲ Rockets engine/motors
 - ▲ Missiles
 - ▲ Munitions Testing

Scope of the Source Category (Cont.)

- ◆ Aircraft Engine Test Firing
 - ▲ Enclosed test cells
 - ▲ Test stands
 - ▲ Hush houses

Scope of the Source Category (Cont.)

- ◆ Non-aerospace Engine Test Facilities
 - ▲ IC engines
 - ▲ Diesel engines
 - ▲ Stationary gas turbines

Scope of the Source Category (Cont.)

- ◆ Auxiliary Operations
 - ▲ Storage tanks
 - ▲ Re-fueling operations
 - ▲ Fuel destruction

Regulatory Development Process

- ◆ PHASE I -- Data Collection
 - ▲ Facility profile
 - ▲ Process description
 - ▲ Application of control technology and pollution prevention

Industry Profile

- ◆ Facilities and facility location
- ◆ Types of facilities (i.e., aircraft engines/rocket engines)
- ◆ Economic data

Process Description

- ◆ Testing schedules
- ◆ Fuel types
- ◆ HAP and non-HAP emission points

Applicable Control Technologies and Pollution Prevention

- ◆ Description of control technologies
- ◆ Safety considerations with installing control technologies
- ◆ Pollution prevention measures
- ◆ Control efficiencies/emission reductions
- ◆ Control costs

Current Industry Practices Relative to Air Pollution Control

- ◆ Determine types of controls
- ◆ Performance of air pollution control

Sources of Information

- ◆ Trade Associations

- ▲ AIA

- ▲ GAMA

- ▲ ATA

- ◆ Literature

- ▲ TRI database

- ▲ State regulations

- ▲ EPA documents

- ▲ Trade journals

Sources of Information (Cont.)

- ◆ Industry Questionnaires
- ◆ Meetings with Industry
- ◆ Source Testing
- ◆ Permit Information
- ◆ Site Visits

Sources of Information (Cont.)

- ◆ Vendors of the following products
 - ▲ Engines
 - ▲ Fuels
 - ▲ Emission control equipment

PHASE II -- Regulatory Development

- ◆ Development of Subcategories
 - ▲ Type
 - ▲ Size
 - ▲ Other

Floor Calculations

- ◆ Emission limits based on maximum achievable control technology (MACT) standards
- ◆ Differing standards for new and existing sources
 - ▲ New sources “...not be less stringent than the emission control that is achieved in practice by the best controlled similar source, as determined by the Administrator.”

Floor Calculations (Cont.)

- ▲ Existing sources “...the average emission limitation achieved by the best performing 12 percent of the existing sources (for which the Administrator has emission information)...”

Propose Standards

- ◆ Emission Limits
- ◆ Compliance dates
- ◆ Test methods and compliance procedures
- ◆ Monitoring and/or inspection requirements
- ◆ Recordkeeping requirements
- ◆ Reporting requirements

Promulgate Final Standards

- ◆ Similar structure to proposed standards

Schedule

- ◆ Background Information
 - ▲ March through May 1998
- ◆ Site Visits
 - ▲ June through December 1998
- ◆ Section 114 Information Collection Request
 - ▲ July 1998 through January 1999

Schedule (Cont.)

- ◆ Testing
 - ▲ August 1998 through March 1999
- ◆ Propose Standards
 - ▲ November 1999
- ◆ Final Standards
 - ▲ November 2000

Stakeholder Meetings

- ◆ EPA plans the following tentative meetings/teleconferences to give stakeholders the opportunity to comment on the regulatory process.

Tentative Topics/Dates

Teleconferences/Meetings

- ◆ Meeting to discuss background information
 - ▲ June 1998
- ◆ Meeting to discuss site visits
 - ▲ August 1998

Tentative Teleconferences/ Meetings (Cont.)

- ◆ Meeting to discuss Section 114
information collection request
 - ▲ September 1998
- ◆ Meeting to discuss testing
 - ▲ October 1998



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 - ▲ Rocket engines/motors
 - ▲ Missiles
 - ▲ Munitions Testing

Scope of the Source Category (Cont.)

- ◆ Aircraft Engine Test Firing
 - ▲ Enclosed test cells
 - ▲ Test stands
 - ▲ Hush houses

Scope of the Source Category (Cont.)

- ◆ Auxiliary Operations
 - ▲ Storage tanks
 - ▲ Re-fueling operations
 - ▲ Fuel destruction

Scope of the Source Category (Cont.)

- ◆ Regulatory Overlap
 - ▲ Aerospace NESHAP
 - ▲ Research and Development NESHAP
 - ▲ Explosives NESHAP
 - ▲ ICCR



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Site Visits

◆ Purpose

- ▲ Familiarize EPA and contractor staff with the source category
- ▲ Identify uncontrolled HAP emission sources
- ▲ Identify control technologies or pollution prevention opportunities

Site Visits (Cont.)

◆ Identification

- ▲ Visit sites that maximize resources
- ▲ Visit sites that demonstrate both uncontrolled and controlled sources
- ▲ Visit a broad range of sites
 - › Department of Defense
 - › NASA
 - › Commercial manufacturer
 - › Rocket/Aircraft engine facilities

Site Visits (Cont.)

◆ Potential Sites

▲ California

- › Edward's Air Force Base
- › China Lake Naval Weapons Center
- › Others?

▲ Utah

- › Hill Air Force Base
- › Thiokol
- › Alliant Techsystems Inc.
- › Others?

Site Visits (Cont.)

◆ Potential Sites

▲ Ohio

- › Wright-Patterson Air Force Base
- › GE Aircraft
- › Allison Gas Turbines (IN)
- › NASA Lewis Research Center?
- › Other?

Site Visits (Cont.)

◆ Potential Sites

▲ North Carolina

- › Cherry Point
- › Seymour-Johnson
- › Pope
- › Other?

Site Visits (Cont.)

◆ Logistics

- ▲ Visit sites during testing
- ▲ Permission to visit sites
- ▲ Clearance issues
- ▲ Safety issues



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Emissions Testing

- ◆ Status of Current Testing
 - ▲ Past Programs
 - ▲ On-going Testing Programs
 - ▲ Emissions Estimations

Emissions Testing (Cont.)

- ◆ Feasability of Gathering Additional Data
 - ▲ Timing
 - ▲ Funding
 - ▲ Testing Methodologies



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Conclusion

- ◆ Web Site Information

 - “www.epa.gov/ttn/uatw/engtest/rock_eng.html”

 - click on “Engine Test Facilities” or
“Rocket Engine Test Firing”

 - Not currently up

- ◆ Thanks



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